INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

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January 7, 2004

TO: Interested Parties / Applicant

RE: Copperfield, LLC / 099-18260-00094

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision – Approval

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to 326 IAC 2, this approval was effective immediately upon submittal of the application.

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days from the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER-AM.dot 9/16/03

January 7, 2004

Mr. Richard Carr
Copperfield, LLC
1115 West Plymouth Street
Bremen, IN 46506

Dear Mr. Carr:

Re: Exempt Construction and Operation Status,
099-18260-00094

The application from Copperfield, LLC, received on November 20, 2003, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following emission units, to be located at 1115 West Plymouth Street, Indiana, is classified as exempt from air pollution permit requirements:

(a) Five (5) natural gas-fired thermo cyclers, identified as H1, H2, H3, H5, and H6, each with maximum heat input capacities of 0.3 mmBtu/hr.
(b) One (1) natural gas-fired high pressure boiler, with a maximum heat input capacity of 3.4 mmBtu/hr.
(c) Nine (9) continuous vulcanization lines for the production of insulated copper wire, coating a maximum of 4,400 lb/hr of copper wire.
(d) Wire bunchers.
(e) Nine (9) printers.

The following conditions shall be applicable:

(1) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

(2) Pursuant to 326 IAC 6-2-4 (Particulate emissions from indirect heating facilities), the particulate emissions from the 3.4 mmBtu/hr boiler, constructed after September 21, 1983 shall be limited to 0.6 lb/mmBtu.

(3) Any change or modification that may increase the potential to emit of an individual hazardous air pollutant (HAP) to 10 tons per year or greater, or that of VOC or a combination of HAPs to 25 tons per year or greater, shall require prior approval of the Office of Air Quality (OAQ).

This exemption is the first air approval issued to this source.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Original signed by Paul Dubenetzky

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

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cc: File - Marshall County
Marshall County Health Department
Air Compliance – Rick Reynolds
Northern Regional Office
Permit Tracking
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Ampil

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for an Exemption

Source Background and Description

Source Name:	**Copperfield, LLC**
Source Location:	**1115 Plymouth St., Bremen, IN 46506-1803**
County:	**Marshall**
SIC Code:	**2822, 3357**
Operation Permit No.:	**099-18260-00094**
Permit Reviewer:	**Madhurima D. Moulik**

The Office of Air Quality (OAQ) has reviewed an application from Copperfield, LLC, relating to the construction and operation of an insulated wire manufacturing source.

Emission Units and Pollution Control Equipment

The source consists of the following emission units and pollution control devices:

(a) Five (5) natural gas-fired thermo cyclers, identified as H1, H2, H3, H5, and H6, each with maximum heat input capacities of 0.3 mmBtu/hr.
(b) One (1) natural gas-fired high pressure boiler, with a maximum heat input capacity of 3.4 mmBtu/hr.
(c) Nine (9) continuous vulcanization lines for the production of insulated copper wire, coating a maximum of 4,400 lb/hr of copper wire.
(d) Wire bunchers.
(e) Nine (9) printers.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (^{o}F)
H1	East Fab W-House North	25	0.67	250	Ambient
H2	East Fab W – house South	25	0.67	250	Ambient
H3	Insualtion Heater	25	0.67	250	Ambient
H4	Insulation Boiler	25	1.0	1,480	Ambient
H5	West Fab – Bunching	25	0.67	250	Ambient
H6	East Fab – Bunching	25	0.67	250	Ambient
V1	Continuous Vulcanization Lines –Vent	-	-	-	-
V2	Printer – Vent	-	-	-	-

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on November 20, 2003.

Emission Calculations

See Appendix A of this document for detailed emission calculations from the combustion sources.

Emissions from the wire bunching process is estimated to be negligible.

PVC Coating Lines:

Maximum usage rate of PVC = 130 lb/hr

Vinyl Compounds have chromium and lead compounds.
Evaporation Rate = Negligible
VOC and HAP emissions = negligible

Printer is used to imprint on PVC coating.
Printer: Using gem type ink: VOC content = 80%
Usage = 0.5 lb/hr
Potential VOC emissions = 0.5 lb/hr x 0.80 x 8760 /2000 tons/yr = **1.75 tons/yr**.

Cleaning agent (Chem-Aqua) for cleaning printers: VOC content = 55%
Usage Rate = 11 gallons/yr
Specific Gravity = 1.188
Therefore density = 1.188 x 8.34 lb/gal = 9.9 lb/gal
Potential VOC emissions = 9.9 lb/gal x 11 gal/yr x 1 ton/2000 lb x 0.55 = **0.03 tons/yr**

Fugitive emissions (submitted by source): VOC = **0.9 tons/year**.

Potential to Emit of the Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential to Emit (tons/yr)
PM	0.2
PM-10	0.2
SO_2	Negligible
VOC	2.78
CO	1.8
NO_x	2.1

HAPs	Potential to Emit (tons/yr)
Single HAP	<10
Total	<25

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of pollutants are less than the levels listed in 326 IAC 2-1.1-3(d)(1). Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3. An exemption will be issued.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3. An exemption will be issued.

County Attainment Status

The source is located in Marshall County.

Pollutant	Status
PM-10	Attainment
SO_2	Attainment
NO_2	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Marshall County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.

(b) Marshall County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)
This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons per year.

This is the first air approval issued to this source.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) applicable to this source. The 3.4 mmBtu/hr boiler is not subject to 40 CFR 60, Subpart Dc, because the heat input capacity is below the applicability threshold of 10 mmBtu/hr. The printers are not subject to NSPS, Subpart QQ, since these printers are not publication rotogravure printing presses.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Part 61, 63) applicable to this source. The printers are not subject to NESHAP, Subpart KK, since these printers are not publication rotogravure printing presses.

State Rule Applicability – Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)

The potential to emit of all criteria pollutants is less than 250 tons per year, and it is not one of the 28 listed source categories. Therefore, 326 IAC 2-2 does not apply.

326 IAC 2-6 (Emission Reporting)

This source is located in Marshall County and the potential to emit of all criteria pollutants are less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The operation of this insulated wire manufacturing source will emit less than 10 tons per year of a single HAP or 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in the permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability – Individual Facilities

326 IAC 6-2- 4 (Particulate Emission Limitations for Sources of Indirect Heating)

The 3.4 mmBtu/hr boiler was constructed in 1990. Particulate emissions from indirect heating facilities constructed after September 21, 1983 shall be limited by the following:

$Pt = 1.09/Q^{0.26}$

Where:

Pt = Pounds of particulate matter emitted per million Btu heat input.

Q = Total source maximum operating capacity rating in million Btu per hour heat input.

Therefore, Pt = 1.09/(3.4)^0.26 = 0.79 lb/mmBtu.

Pursuant to 326 IAC 6-2-4(a), Pt cannot exceed 0.6 lb/mmBtu for a boiler of less than 10 mmBtu/hr capacity.

Therefore, Pt = 0.6 lb/mmBtu = (0.6 x 3.4 lb/hr x 8760/2000) tons/yr = 8.9 tons/yr.

The potential to emit of PM from the boiler is less than this limit. Therefore, the boiler is in compliance with this rule.

326 IAC 8-3-2 and 326 IAC 8-3-5 (Organic Solvent Degreasing Operations)

There are no organic solvent degreasers at this source. The solvents used are for spot cleaning of printer.

326 IAC 8-5-5 (Graphic Arts Operations)

The printers at this source do not meet the definition of packaging rotogravure printers, publication rotogravure printers, or flexographic printers as defined in 326 IAC 8-5-5(b). Therefore, this rule does not apply.

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements)

The potential VOC emissions from all the emission units at this source are less than 25 tons per year. Therefore, 326 IAC 8-1-6 does not apply.

Conclusion

The operation of this insulated wire manufacturing source shall be subject to the conditions of the Exemption No.: 099-18260-00094.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Thermo Cyclers + Small Industrial Boiler

Company Name: **Copperfield, LLC**
Address City IN Zip: **1115 West Plymouth Street, Bremen, IN 46505**
Permit Number: **099-18260**
Plt ID: **099-00094**
Reviewer: **Madhurima D. Moulik**
Date: **15-Dec-03**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
4.9	42.9

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.0	0.2	0.0	2.1	0.1	1.8

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Thermo-Cyclers + Small Industrial Boiler
HAPs Emissions

Company Name: **Copperfield, LLC**
Address City IN Zip: **1115 West Plymouth Street, Bremen, IN 46505**
Permit Number: **099-18260**
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Reviewer: **Madhurima D. Moulik**
Date: **15-Dec-03**

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	4.507E-05	2.575E-05	1.610E-03	3.863E-02	7.297E-05

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.073E-05	2.361E-05	3.005E-05	8.156E-06	4.507E-05

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.